

LISTING OF THE CLAIMS

A complete listing of the claims is provided below. This listing of claims will replace all prior versions and listings of claims in the application.

1. (Currently Amended) A ~~T~~ransponder circuit with a resonator with a high quality factor ~~(8)~~ and a demodulator ~~(7)~~, whereby an AM-modulated signal that is transmitted by a transmitter/receiver device ~~(2,3)~~ and that after its demodulation has a frequency for exciting the resonator with a high quality factor ~~(8)~~ that corresponds to the resonance frequency of the resonator with a high quality factor ~~(8)~~, ~~characterized in that~~ wherein

said transponder circuit additionally has a rectifier ~~(9)~~, an energy store ~~(10)~~, and a semiconductor circuit ~~(11)~~ that are downstream of said resonator and the input impedance of said resonator with a high quality factor ~~(8)~~ is matched to the load impedance of said semiconductor circuit ~~(11)~~ such that a supply voltage is obtained for said semiconductor circuit ~~(11)~~ in said energy store ~~(10)~~ by impedance transformation.

2. (Currently Amended) The ~~T~~ransponder circuit in accordance with claim 1, ~~characterized in that~~ further comprising

a broadband signal ~~is used for exciting~~ configured to excite said resonator.

3. (Currently Amended) The ~~T~~ransponder circuit in accordance with claim 1, ~~characterized in that~~ further comprising

a two-tone signal ~~is used for exciting~~ configured to excite said resonator.

4. (Currently Amended) The ~~T~~ransponder circuit in accordance with claim 1, ~~characterized in that~~ wherein

the frequency of the excitation signal is matched to the resonance frequency of said resonator (tracking).

5. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~

~~characterized in that~~ wherein

a quartz is used as resonator with a high quality factor.

6. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~

~~characterized in that~~ wherein

a piezoelectric resonator is used as resonator with a high quality factor.

7. (Currently Amended) The Transponder circuit in accordance with claim 6,
~~characterized in that~~ wherein

a piezoelectric resonator made of langasite is used as resonator with a high quality
factor.

8. (Currently Amended) The Transponder circuit in accordance with claim 6,
~~characterized in that~~ wherein

a piezoelectric resonator made of gallium orthophosphate is used as resonator with a
high quality factor.

9. (Currently Amended) The Transponder circuit in accordance with claim 6,
~~characterized in that~~ wherein

a piezoelectric resonator made of lithium niobate is used as resonator with a high
quality factor.

10. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~

~~characterized in that~~ wherein

an LC oscillating circuit is used as resonator with a high quality factor.

11. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~

~~characterized in that~~ wherein

a ceramic resonator is used as resonator with a high quality factor.

12. (Currently Amended) The Transponder circuit in accordance claim 1 ~~with any of~~
~~claims 1 through 4,~~

~~characterized in that~~ wherein

a cable resonator is used as resonator with a high quality factor.

13. (Currently Amended) The Transponder circuit in accordance with claim 1
wherein ~~any of claims 1 through 4, characterized in that~~ a dielectric resonator is used as
resonator with a high quality factor.

14. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~

~~characterized in that~~ wherein

acoustic resonators are used as resonators with a high quality factor.

15. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~
~~characterized in that~~ wherein
an antenna is used as resonator with a high quality factor.

16. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~
~~characterized in that~~ wherein
tuning-fork oscillators are used as resonators with a high quality factor.

17. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~
~~characterized in that~~ wherein
mechanical oscillators are used as resonators with a high quality factor.

18. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~
~~characterized in that~~ wherein
ferrimagnetic resonators are used as resonators with a high quality factor.

19. (Currently Amended) The Transponder circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 4,~~
~~characterized in that~~ wherein
resonators working with magnetostatic waves are used as resonators with a high
quality factor.

20. (Currently Amended) The ~~Transponder~~ circuit in accordance with claim 1 ~~any of~~
~~claims 1 through 19,~~
~~characterized in that~~ wherein
the stored data are used for calibrating sensors.